



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/601,149	06/20/2003	Shen Buswell	10015382-3	7243

7590 02/10/2004

HEWLETT-PACKARD COMPANY  
Intellectual Property Administration  
P. O. Box 272400  
Fort Collins, CO 80527-2400

EXAMINER	
STEPHENS, JUANITA DIONNE	
ART UNIT	PAPER NUMBER
2853	

DATE MAILED: 02/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/601,149

Applicant(s)

BUSWELL ET AL.

Examiner

Juanita D. Stephens

Art Unit

2853

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 17-21 is/are allowed.
- 6) ☒ Claim(s) 6,8,9,15 and 16 is/are rejected.
- 7) ☒ Claim(s) 1-5,7 and 10-14 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 June 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |  |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____  |

## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description: Reference number 5b and 5c. A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.
2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the recitation of "a long axis" must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.
3. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### ***Specification***

4. The disclosure is objected to because of the following informalities:  
On page 2, paragraph 1, line 3 after "number" insert –US 6,666,546 B1--.  
Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 6, 8, 9, 15, and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Browning et al. (US 6,132,033).

Browning et al. discloses a printhead head (12) comprising: 1) a substrate (16) extending between generally opposing first (surface on which barrier layer 34 is provided) and second surfaces (surface on which the pen body 14 is attached), 2) a slot (26) received in the substrate and extending along a long axis (defined as the direction of length of the substrate), the slot having a central region (defined between end edge 50) and at least one terminal region (end edge) which are arranged generally along the long axis, wherein the terminal region comprises at least in part a bowl-shaped portion (col 3, lns 16-20) (as seen in Fig. 3), 3) wherein the bowl-shaped portion is generally frusto-conical (as seen in Fig. 3), 4) wherein the bowl-shaped portion is generally hemispherical (as seen in Fig. 3), 5) wherein the at least one terminal region comprises two terminal regions (col 3, lns 16-20), and 6) a print cartridge (10) incorporating the print head.

***Allowable Subject Matter***

7. Claims 1-5 will be allowed after corrections as identified in the DRAWING section are made.

8. The following is a statement of reasons for the indication of allowable subject matter:

The combination of a slot received in the first surface and extending along a long axis, the slot having a first cross section generally parallel to the first surface, the first cross section having a first shape, and the slot having a second cross section generally parallel to the first surface and spaced from the first cross section, the second cross section having a second shape comprising a central region and at least one terminal region joined with the central region wherein the terminal region when measured orthogonally to the long axis of the slots is wider than the central region measured orthogonally to the long axis. This invention solves the problem of reducing areas of stress concentration by distributing stress over a greater amount of substrate material, while resulting in stronger more robust substrate that is less prone to cracking. It is this combination, which is not taught or suggested in the prior art, which make the claims allowable over the prior art.

9. Claims 17-21 are allowed.

10. The following is a statement of reasons for the indication of allowable subject matter:

The combination of a slot received in the substrate and having a central region joined with four terminal regions, wherein the central region extends between the first and second surfaces, and the four terminal regions individually comprising, at least in part, bowl-shaped portions, wherein two of the terminal regions are disposed proximate the first surface and the other two terminal regions are disposed proximate the second surface.

Art Unit: 2853

11. Claim 7, 10, 12, 13 and 14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claim 11 will be allowed when claim 10 is rewritten in independent form including all of the limitations of the base claim and any intervening claims

#### **Contact Information**

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Juanita D. Stephens whose telephone number is (703) 308-1204. The examiner can normally be reached on Flex.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Meier can be reached on (703) 308-4896. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the

status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "Juanita Stephens". The signature is fluid and cursive, with the first name "Juanita" being more prominent than the last name "Stephens".

Juanita Stephens  
Primary Examiner  
2853  
February 8, 2004